

Kaufman, Claire

From: Kaufman, Claire
Sent: Wednesday, August 13, 2003 10:50 AM
To: STIC-Biotech/ChemLib
Subject: sequence search 09/990,940

SEQUENCE SEARCH REQUEST

NAME: CLAIRE KAUFMAN AU: 1646 MAILBOX: 10D19

SERIAL NUMBER: 09/990,940 DATE: 8/13/03

Please search SEQ ID NO:17 and 18 and
oligo search both 17 and 18 (I need 50 contiguous amino acids or 100 contiguous
nucleotides). Please search in commercial and interference database.

Please put results on disk.

Thanks!

Claire Kaufman
AU 1646, 305-5791

Art Unit: 1646

AC Q8BHH0; PRELIMINARY; PRT; 365 AA
DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
5 DE Hypothetical rhodopsin-like GPCR superfamily containing protein.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
10 RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Dorsal root ganglion, and Head;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium,
15 RA the RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).
DR EMBL; AK048439; BAC33337.1; -.
20 DR EMBL; AK051723; BAC34735.1; -.
KW Hypothetical protein.
SQ SEQUENCE 365 AA; 41759 MW; 1EB7E5369632ED56 CRC64;

Query Match 88.2%; Score 1905; DB 11; Length 365;
25 Best Local Similarity 100.0%; Pred. No. 8.6e-160;
Matches 365; Conservative 0; Mismatches 0; Indels 0; Gaps 0

Qy 52 MLIFALALFGNALVYYVVTRSKAMRTVTNIFICSLALS DLLIVFFCIPVTMLQNVSDTWL 111
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
30 Db 1 MLIFALALFGNALVYYVVTRSKAMRTVTNIFICSLALS DLLIVFFCIPVTMLQNVSDTWL 60

Qy 112 GGAFICKMVPFVQCTAIVTEILTMTCIAYERHQGLVHPFKMKRQYTNQRAFTMLGVVWLV 171
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 GGAFICKMVPFVQCTAIVTEILTMTCIAYERHQGLVHPFKMKRQYTNQRAFTMLGVVWLV 120
35
Qy 172 AIIIGSPMWHVQRLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSV 231
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 121 AIIIGSPMWHVQRLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSV 180

40 Qy 232 LYKGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFAVCWAPFHIV 291
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 181 LYKGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFAVCWAPFHIV 240

45 Qy 292 HMMIEYSNFEKEYDEVTIKMIFAIVQIIGFFNSICNPIIYALMNENFKKNFVSACYCIV 351
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 241 HMMIEYSNFEKEYDEVTIKMIFAIVQIIGFFNSICNPIIYALMNENFKKNFVSACYCIV 300

50 Qy 352 KETPSSARKHGSSGAMVMHRRAKLAAREN PVEIKGEAFGGSNIDIKWCEQPEKKRRSKV 411
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 301 KETPSSARKHGSSGAMVMHRRAKLAAREN PVEIKGEAFGGSNIDIKWCEQPEKKRRSKV 360

Qy 412 ASCPL 416
||| |||
Db 361 ASCPL 365

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SEQUENCE COMPARISON A

AC AAB02853;
XX
DT 22-AUG-2000 (first entry)
XX
5 DE Human G protein coupled receptor hRUP4 (V272K) protein SEQ ID NO:128.
XX
KW Human; G protein coupled receptor; GPCR; transmembrane receptor;
KW identification; agonist; screening; therapeutic; pharmaceutical;
KW mutant.
10 XX
OS Homo sapiens.
OS Synthetic.
XX
15 PN WO200022131-A2.
XX
PD 20-APR-2000.
XX
PF 13-OCT-1999; 99WO-US24065.
XX
20 PR 13-OCT-1998; 98US-0170496.
PR 12-NOV-1998; 98US-0108029.
PR 20-NOV-1998; 98US-0109213.
PR 27-NOV-1998; 98US-0110060.
PR 16-FEB-1999; 99US-0120416.
25 PR 26-FEB-1999; 99US-0121852.
PR 12-MAR-1999; 99US-0123944.
PR 12-MAR-1999; 99US-0123945.
PR 12-MAR-1999; 99US-0123946.
PR 12-MAR-1999; 99US-0123948.
30 PR 12-MAR-1999; 99US-0123949.
PR 12-MAR-1999; 99US-0123951.
PR 28-MAY-1999; 99US-0136436.
PR 28-MAY-1999; 99US-0136437.
PR 28-MAY-1999; 99US-0136439.
35 PR 28-MAY-1999; 99US-0137127.
PR 28-MAY-1999; 99US-0137131.
PR 28-MAY-1999; 99US-0137567.
PR 30-JUN-1999; 99US-0141448.
PR 27-AUG-1999; 99US-0151114.
40 PR 03-SEP-1999; 99US-0152524.
PR 29-SEP-1999; 99US-0156633.
PR 29-SEP-1999; 99US-0156555.
PR 29-SEP-1999; 99US-0156634.
XX
45 PA (AREN-) ARENA PHARM INC.
XX
PI Behan DP, Lehmann-Bruinsma K, Chalmers DT, Chen R, Dang HT;
PI Gore M, Liaw CW, Lin I, Lowitz K, White C;
XX
50 DR WPI; 2000-317986/27.
DR N-PSDB; AAA46115.
XX
PT Non-endogenous, human G protein-coupled receptors for screening
PT receptor, inverse or partial agonists useful as therapeutic agents -

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XX

PS Example 2; Page 164-166; 187pp; English.

XX

5 CC The present invention describes transmembrane receptors, preferably
CC human G protein coupled receptors (GPCR), for which the endogenous
CC ligand is unknown (orphan GPCR receptors). More specifically the present
CC invention relates to non-endogenous, constitutively activated versions
CC of a human GPCR. These non-endogenous human GPCRs can be useful for
CC the direct identification of candidate compounds as receptors agonists,
10 CC inverse agonists or partial agonists for use as pharmaceutical agents.
CC AAA46017 to AAA46126 and AAB02825 to AAB02859 represent sequences used in
CC the exemplification of the present invention.

XX

15 SQ Sequence 431 AA;

Query Match 81.4%; Score 1758; DB 21; Length 431;

Best Local Similarity 79.7%; Pred. No. 1.2e-187;

Matches 337; Conservative 37; Mismatches 39; Indels 10; Gaps

3;

20

Qy 4 NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTPQLPARARLALLVGMLIFALALFGNA 63
|:| || | ||| ||||| ||||| | ||||| ||:|| | ||:||:|| | :||| ||| |||

Db 5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLAALVLTGVLI FALALFGNA 64

25

Qy 64 LVVYVVTRSKAMRTVTNIFICSLALSDL LIVFFCIPV TMLQNVSDTWLGGAFICKMVPFV 123
|| | ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| :|| | ||| ||| |||

Db 65 LVFYVVTRSKAMRTVTNIFICSLALSDL LITFFCIPV TMLQNI SDNLGGAFICKMVPFV 124

30

Qy 124 QCTAIVTEILTMT CIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183
| |:||:| ||| ||| ||| ||| ||| ||| ||| :|| | ||| ||| ||| :| :||| |||

Db 125 QSTA VVTEMLTMT CIAVERHQGLVHPFKMKWQYTNRAFTMLGVVWLVAIVGSPMWHVQ 184

Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTFLLPLLLS VLYGKIGYELWI K 243
:| ||| ||| ||| ||| :| ||| ||| ||| ||| ||| :| :|| | ||| |||

Db 185 QLEIKYDFLYEKEHICCLEEW TSPVHQKIYTTFILVILFLLPLMVMLILY SKIGYELWI K 244

Qy 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVLF AWCAPFHIVHMMIEYSNFEKE 303
||:| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| :| ||| ||| |||

Db 245 KRG DGSVLRTIHGKEMSKIARKKKRAKIMMVTVVALFAWCAPFHVVHMMIEYSNFEKE 304

40

Qy 304 YDEVTIKMIFAIVQIIGFFNSICNP IYALMNENFKNFVSAV CYCIVKETPSSARKHGS 363
||:| ||| ||| ||| ||| ||| :| ||| ||| :| ||| ||| :| | |:||:

Db 305 YDDVTIKMIFAIVQIIGFSNSICNP IYAFMNENFKNVLSAV CYCIVNKTFS PAQRHGN 364

45

Qy 364 SGAMVMHRRAKLAAREN P V-EIKGEAFGGSNIDIKWCEQPEKKR-----RSKVA-S 413
|| :| :| :| :| :| :| :| :| :| :| :| :| :| :| :| :| :| :|

Db 365 SGITMMRKKAKFSLREN PVEETKGEAFSDGNIEVKLCEQTEEKKLKRHLALFR SELAEN 424

50

Qy 414 CPL 416

||

Db 425 SPL 427

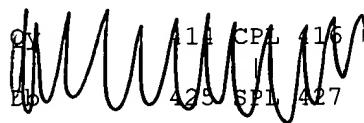
SEQUENCE COMPARISON - Q

Db 272 CVVVVF AVSWLPLHAFQLAVDIDSQVLDLKEY-----KLIFTVFHIIAMCSTFANPLLYG 326
Qy 333 LMNENFKKNFVSA 345 8/9=88% identical
|| |::| |:||
5 Db 327 WMNSNYRKAFLSA 339

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SEQUENCE COMPARISON - C

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SEQUENCE COMPARISON →

5

10 AC AAY71309;
XX
DT 02-NOV-2000 (first entry)
XX
DE Human orphan G protein-coupled receptor hRUP4.
XX
15 KW Human; orphan G protein-coupled receptor; GPCR; hRUP4; drug screening;
KW transmembrane receptor; expressed sequence tag; EST; signal cascade.
XX
OS Homo sapiens.
XX
20 PN WO200031258-A2.
XX
PD 02-JUN-2000.
XX
PF 13-OCT-1999; 99WO-US23687.
XX
25 PR 20-NOV-1998; 98US-0109213.
PR 16-FEB-1999; 99US-0120416.
PR 26-FEB-1999; 99US-0121852.
PR 12-MAR-1999; 99US-0123946.
30 PR 12-MAR-1999; 99US-0123949.
PR 28-MAY-1999; 99US-0136436.
PR 28-MAY-1999; 99US-0136437.
PR 28-MAY-1999; 99US-0136439.
PR 28-MAY-1999; 99US-0136567.
35 PR 28-MAY-1999; 99US-0137127.
PR 28-MAY-1999; 99US-0137131.
PR 29-JUN-1999; 99US-0141448.
PR 29-SEP-1999; 99US-0156555.
PR 29-SEP-1999; 99US-0156633.
40 PR 29-SEP-1999; 99US-0156634.
PR 29-SEP-1999; 99US-0156653.
PR 01-OCT-1999; 99US-0157280.
PR 01-OCT-1999; 99US-0157281.
PR 01-OCT-1999; 99US-0157282.
45 PR 01-OCT-1999; 99US-0157293.
PR 01-OCT-1999; 99US-0157294.
PR 12-OCT-1999; 99US-0416760.
PR 12-OCT-1999; 99US-0417044.
XX
50 PA (AREN-) ARENA PHARM INC.
XX
PI Chen R, Dang HT, Liaw CW, Lin I;
XX
DR WPI; 2000-400068/34.

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DR N-PSDB; AAD01136.

XX

PT Novel human orphan G protein-coupled receptors and the encoding cDNAs
PT for use in the identification of G protein-coupled receptor agonists -

5 XX

PS Claim 74; Page 89-91; 102pp; English.

XX

CC The present amino acid sequence is the hRUP4, an endogenous human
CC orphan G protein-coupled receptor (GPCR). The full length hRUP4 cDNA was
10 CC cloned by RT-PCR with human brain cDNA as template. The hRUP4 PCR
CC fragment obtained was an alternatively spliced form of the EST (expressed
CC sequence tag) clone AI307658. The orphan GPCR of the invention, like
CC all GPCRs has seven transmembrane alpha helices with an extracellular
CC N-terminus and an intracellular C-terminus. However, no endogenous
15 CC ligands has yet been identified for the proteins of the invention. The
CC orphan GPCRs may be used in the identification of their endogenous
CC ligands, and to screen potential GPCR agonists and antagonists for use as
CC pharmaceutical agents. The proteins may also be used in the study of
CC GPCR-mediated signalling cascades, and to elucidate their precise role in
20 CC normal and diseased human conditions. Nucleic acid encoding human orphan
CC GPCRs may be used for tissue localisation expression analysis to provide
CC information about their function in healthy and pathological states.

XX

25 SQ Sequence 431 AA;

25 Query Match 81.7%; Score 1764; DB 21; Length 431;
Best Local Similarity 79.9%; Pred. No. 2.5e-188;
Matches 338; Conservative 37; Mismatches 38; Indels 10; Gaps
3;30 Qy 4 NLTAEQLSALLRLHNLTREQFIAHYGLRPLVLTPLQLPARARLALLLVGMLIFALALFGNA 63
|:| || | ||| ||||| ||||| | ||||| ||:|| | ||:|||:| | :|||||||||
Db 5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLALVLTGVLIFALALFGNA 6435 Qy 64 LVVYVVTRSKAMRTVTNIFICSLALSDLIVFFCIPVVMLQNVSDTWLGGAFICKMVPFV 123
|| |||||||||||||||||| ||||| |||:|| | |||||||||||
Db 65 LVFYVVTRSKAMRTVTNIFICSLALSDLITFFCIPVVMLQNISDNWLGGAFICKMVPFV 12440 Qy 124 QCTAIVTEILMTCTIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVVLVIIIGSPMWHVQ 183
| |:|||:| ||||||||||| ||||| |||:||| |||:|||:| :| |||
Db 125 QSTAVVTEMLMTCTIAVERHQGLVHPFKMKWQYTNRAFTMLGVVVLVAVIVGSPMWHVQ 18445 Qy 184 RLEIKYDFLYKEHICCLEEWSSPVHQKIYTTFILVTLFLPLLLSVLYGKIGYELWIK 243
:||||||||| |||||:|||:||| ||||| |||:|||:|||:|||:|||
Db 185 QLEIKYDFLYKEHICCLEEWTS PVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK 24450 Qy 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVLFAVCWAPFHIVHMMIEYSNFEKE 303
||:||||| ||||| ||| ||| ||| ||| ||| ||| |||:||| |||
Db 245 KRGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVVALFAVCWAPFHVVHMMIEYSNFEKE 304Qy 304 YDEVTIKMI FAIVQIIGFFNSICNPIIYALMNNENFKKNFVSACYCIVKETPSSARKHGS 363
||:||||| ||||| ||| |||:|| | ||| ||| :||| ||| :| | |:|||:
Db 305 YDDVTIKMI FAIVQIIGFSNSICNPIVYAFMNNENFKKNVLSAVCYCIVNKTFSPAQRHGN 364

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Qy 364 SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKR-----RSKVA-S 413
|| :| ::|| :||||| |||||| ||::| ||| |::| :||| :||| :| :

Db 365 SGITMMRKKAKFSLRENPVEETKGEAFSDGNIEVKLCEQTEEKKKLKRHLALFRSELAEN 424

5 Qy 414 CPL 416
||
Db 425 SPL 427

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Db 224 LLILYVLPLGIISFSYTRI----WSKLKNHVSPGAANDHYH-----QRRQKTTKMLV 271

Qy 276 TVVVLFAVCWAPFHIVHMMIEYSNFE---KEYDEVTIKMIFAIVQIIGFFNSICNPIIYA 332
|||:||| | | | : :: : ||| |:|| : || :: ||::|

5 Db 272 CVVVVFAVSWLPLHAFQLAVDIDSQVLDLKEY----KLIFTVFHIIAMCSTFANPLLYG 326

Qy 333 LMNENFKKNFVSA 345 8/9=88% identical
|| |::| |:||

Db 327 WMNSNYRKAFLSA 339

10

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5 AC AAY94993;
XX
DT 19-JUN-2000 (first entry)
XX
DE Human secreted protein vc38_1, SEQ ID NO:26.
XX
KW Human; secreted protein; cancer; tumour; cardiovascular disorder;
KW blood disorder; haemophilia; autoimmune disease; diabetes; inflammation;
10 KW infection; fungal; bacterial; viral; HIV; allergy; arthritis;
KW neurodegenerative disease; asthma; contraceptive.
XX
OS Homo sapiens.
XX
15 PN WO200011015-A1.
XX
PD 02-MAR-2000.
XX
20 PF 24-AUG-1999; 99WO-US19351.
XX
PR 24-AUG-1998; 98US-0097638.
PR 24-AUG-1998; 98US-0097659.
PR 09-SEP-1998; 98US-0099618.
PR 28-SEP-1998; 98US-0102092.
25 PR 25-NOV-1998; 98US-0109978.
PR 23-DEC-1998; 98US-0113645.
PR 23-DEC-1998; 98US-0113646.
PR 23-AUG-1999; 99US-0379246.
XX
30 PA (ALPH-) ALPHAGENE INC.
XX
PI Valenzuela D, Yuan O, Hoffman H, Hall J, Rapiejko P;
XX
35 DR WPI; 2000-224657/19.
XX
PT New secreted or transmembrane proteins and polynucleotides encoding
PT them, useful for treating neurodegenerative disorders, autoimmune
PT diseases and cancer -
XX
40 PS Claim 35; Page 284-285; 357pp; English.
XX
CC The invention relates to 40 human secreted proteins (AAY94981-Y95020),
CC and cDNA sequences encoding them (AAA23423-A23462). The secreted
CC proteins of the invention include those that are thought to be only
45 CC partially secreted, i.e., transmembrane proteins. The proteins of the
CC invention may exhibit one or more activities selected from the following:
CC cytokine activity; cell proliferation; differentiation; immune
CC modulation; haematopoiesis regulation; tissue growth activity;
CC activin/inhibin activity; chemotactic/chemokinetic activity; haemostatic
50 CC and thrombolytic activity; anti-inflammatory activity; and tumour
CC inhibition activity. The proteins may be administered to patients as
CC vaccines, and the nucleotides may be used as part of a gene therapy

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CC regime. Diseases or conditions that may be treated using the proteins or
CC nucleotides of the invention include autoimmune diseases; genetic
CC disorders; haemophilia; cardiovascular diseases; cancer; bacterial,
CC fungal and viral infections, especially HIV; multiple sclerosis;
5 CC rheumatoid arthritis; pulmonary inflammation; Guillain-Barre syndrome;
CC insulin dependent diabetes mellitus; and allergic reactions such as
CC asthma and anaemia. They may also be used for treating wounds, burns,
CC ulcers, osteoporosis, osteoarthritis, periodontal diseases, Alzheimer's
CC disease, Parkinson's disease, Huntington's disease and amyotrophic
10 CC lateral sclerosis (ALS). Proteins with activin/inhibin activity may
CC additionally be useful as contraceptives. Nucleic acid sequences of the
CC invention may be used in chromosome mapping, and as a source of
CC diagnostic primers and probes. The present sequence represents one of the
CC 40 proteins of the invention.

15 SQ Sequence 431 AA;

Query Match 81.8%; Score 1767; DB 21; Length 431;
Best Local Similarity 80.1%; Pred. No. 1.2e-188;
20 Matches 339; Conservative 36; Mismatches 38; Indels 10; Gaps
3;

30 Qy 124 QCTAIIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183

35 Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSVLYGKIGYELWIK 243

Db 185 QLEIKYDFLYKEHICCLEEWTSVPHQKITYTTFILVILFLLPLMVMLILYSKIGYELWI 244
 Ov 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVLFACWCAPFHIVHMMIEYSNFEKE 303

Db 245 KRGDGSQLRTIHGKEMSKIARKKKRAVIMMVTVALFAVCWAPFHVVHMMIEYSNFEKE 304

45 Db 305 YDDVTIKMIFAIVQIIGFSNSICNPIVYAFMENFKKNVLSAVCYCIVNKTFSPAQRHGN 364

Db 365 SGITMMRKAKFSLRENPV EETKGEAFSDGNIEVKLCEQTEKKLKRHLALFR SELAEN 424

Qy 414 CPL 416
||
Db 425 SPL 427



5 AC Q9Z2D5;
DT 30-MAY-2000 (Rel. 39, Created)
DT 30-MAY-2000 (Rel. 39, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last annotation update)
DE Neuropeptide Y receptor type 2 (NPY2-R) (NPY-Y2 receptor).
GN NPY2R.
10 OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
15 RP SEQUENCE FROM N.A.
RX MEDLINE=99017376; PubMed=9802390;
RA Sharma P.S., Holmberg S.K., Eriksson H., Beck-Sickinger A.G.,
RA Grundemar L., Larhammar D.;
RT "Cloning and functional expression of the guinea pig neuropeptide Y
20 RT Y2 receptor.";
RL Regul. Pept. 75:23-28(1998).
CC --!- FUNCTION: RECEPTOR FOR NEUROPEPTIDE Y AND PEPTIDE YY.
CC --!- SUBCELLULAR LOCATION: Integral membrane protein.
CC --!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
25 CC HIGHEST TO TACHYKININS RECEPTORS.
CC -----
-
CC This SWISS-PROT entry is copyright. It is produced through a
collaboration
30 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
-
CC the European Bioinformatics Institute. There are no restrictions on
its
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CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
40 CC or send an email to license@isb-sib.ch).
CC -----
-
DR EMBL; AF072821; AAD13143.1; -.
DR InterPro; IPR000276; GPCR_Rhodpsn.
45 DR Pfam; PF00001; 7tm_1; 1.
DR PRINTS; PR00237; GPCRRHODOPSN.
DR PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
DR PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
50 KW G-protein coupled receptor; Transmembrane; Glycoprotein;
KW Phosphorylation; Lipoprotein; Palmitate.

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DE Neuropeptide Y receptor type 2 (NPY2-R) (NPY-Y2 receptor).
GN NPY2R.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
5 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
10 RA Ammar D.A., Kolakowski L.F. Jr., Eadie D.M., Wong D.J., Ma Y.Y.,
RA Yang-Feng T.L., Thompson D.A.;
RL Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
CC -!- FUNCTION: RECEPTOR FOR NEUROPEPTIDE Y AND PEPTIDE YY.
CC -!- SUBCELLULAR LOCATION: Integral membrane protein.
15 CC -!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
CC HIGHEST TO TACHYKININS RECEPTORS.
CC -----
-
20 CC This SWISS-PROT entry is copyright. It is produced through a
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation
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CC the European Bioinformatics Institute. There are no restrictions on
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way
CC modified and this statement is not removed. Usage by and for
commercial
CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
30 CC or send an email to license@isb-sib.ch).
CC -----
-
35 DR EMBL; U50144; AAB40600.1; -.
DR InterPro; IPR000276; GPCR_Rhodpsn.
DR Pfam; PF00001; 7tm_1; 1.
DR PRINTS; PR00237; GPCRRHODOPSN.
DR PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
40 DR PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
KW G-protein coupled receptor; Transmembrane; Glycoprotein;
KW Phosphorylation; Lipoprotein; Palmitate.
FT DOMAIN 1 52 EXTRACELLULAR (POTENTIAL).
FT TRANSMEM 53 75 1 (POTENTIAL).
FT DOMAIN 76 85 CYTOPLASMIC (POTENTIAL).
45 FT TRANSMEM 86 107 2 (POTENTIAL).
FT DOMAIN 108 127 EXTRACELLULAR (POTENTIAL).
FT TRANSMEM 128 149 3 (POTENTIAL).
FT DOMAIN 150 169 CYTOPLASMIC (POTENTIAL).
FT TRANSMEM 170 190 4 (POTENTIAL).
50 FT DOMAIN 191 217 EXTRACELLULAR (POTENTIAL).
FT TRANSMEM 218 243 5 (POTENTIAL).
FT DOMAIN 244 271 CYTOPLASMIC (POTENTIAL).
FT TRANSMEM 272 294 6 (POTENTIAL).
FT DOMAIN 295 307 EXTRACELLULAR (POTENTIAL).

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FT TRANSMEM 308 331 7 (POTENTIAL).
 FT DOMAIN 332 384 CYTOPLASMIC (POTENTIAL).
 FT CARBOHYD 13 13 N-LINKED (GLCNAC. . .) (POTENTIAL).
 FT DISULFID 126 206 BY SIMILARITY.
 5 FT LIPID 345 345 PALMITATE (POTENTIAL).
 SQ SEQUENCE 384 AA; 42943 MW; 468D19CBA8F29681 CRC64;

Query Match 20.8%; Score 449; DB 1; Length 384;
 Best Local Similarity 31.6%; Pred. No. 7.4e-25;
 10 Matches 99; Conservative 74; Mismatches 106; Indels 34; Gaps 9;

Qy 44 RLALLVGMLIFALALFGNALVYVVTRSKAMRTVTNIFICSLALSLLIVFFCIPVTML 103
 :: |:| | | | : ||:||:|| | : ||||||| || : ||:||:| :| | :| |:
 15 Db 53 QVVLILAYCSIILLGVIGNSLVIHVVIKFMSMRTVTNFFIANLAVADLLVNTLCLPFTLT 112

Qy 104 QNVSDTWLGGAFICKMVPFVQCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFT 163
 : | | | : | :||: | | : :|| | ||:||: :| : : : : | :| | :| |:
 Db 113 YTLMGEWKMGPVLCILVPAQGLAVQVSTITLTVAIDRHRCIV--YHLESKISKQISFL 170
 20

Qy 164 MLGVVWLVAIIIGSPM--WHVQRLEIKYDFLYEKEHICCLEEW--SSPVHQKIYTTFI 217
 ::|: | |: :: ||: :|| | || | : | |: | :| | :| |:
 Db 171 IIGLAWGVSVALLASPLAIFREYSLIEIIPDF---EIVACTEKWPGEEKGIYGTIYSLSS 226

25 Qy 218 LVTLFLLPLLLLSSVLYGKIGYELW--IKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMV 275
 |: |::|| | :| | :| | :| | :| | :| | :| | :| |:
 Db 227 LLILYVLPLGIISFSYTRI---WSKLKNHVSPGAHDHYH-----QRRQKTTKMLV 274

Qy 276 TVVVLFAVCWAPFHIVHMMIEYSNFE---KEYDEVTIKMIFAIVQIIGFFNSICNPIIYA 332
 |||:||| | | | : :: : | ||| | :|| | :| | :| |:
 30 Db 275 CVVVVFAVSWLPLHAFQLAVDIDSHVLDLKEY---KLIFTVFHIIAMCSTFANPLLYG 329

Qy 333 LMNENFKKNFVSA 345
 || |::| |:||
 35 Db 330 WMNSNYRKAFLSA 342

neuropeptide Y/peptide YY receptor Y2 - human

N;Alternate names: neuropeptide y/peptide YY receptor type 2

40 C;Species: Homo sapiens (man)

C;Date: 01-Mar-1996 #sequence_revision 01-Mar-1996 #text_change 20-Apr-2000

C;Accession: I39187; I39163; G02301

R;Gerald, C.; Walker, M.W.; Vaysse, P.J.

J. Biol. Chem. 270, 26758-26761, 1995

45 A;Title: Expression cloning and pharmacological characterization of a human hippocampal neuropeptide Y/peptide YY Y2 receptor subtype.

A;Reference number: I39187; MUID:96070760; PMID:7592910

A;Accession: I39187

A;Status: preliminary

50 A;Molecule type: mRNA

A;Residues: 1-381 <GER>

A;Cross-references: EMBL:U36269; NID:g1063633; PIDN: AAC50281.1; PID:g1063634

R;Rose, P.M.; Fernandes, P.; Lynch, J.S.; Frazier, S.T.; Fisher, S.M.;

Kodukula, K.; Kienzle, B.; Seethala, R.

Art Unit: 1646

; Patent No. 5989834
; GENERAL INFORMATION:
; APPLICANT: Synaptic Pharmaceutical Corporation
; TITLE OF INVENTION: NUCLEIC ACID ENCODING NEUROPEPTIDE
5 ; TITLE OF INVENTION: Y/PEPTIDE YY (Y2) RECEPTORS AND USES THEREOF
; NUMBER OF SEQUENCES: 27
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Cooper & Dunham LLP
; STREET: 1185 Avenue of the Americas
10 ; CITY: New York
; STATE: New York
; COUNTRY: U.S.A.
; ZIP: 10036
; COMPUTER READABLE FORM:
15 ; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
20 ; APPLICATION NUMBER: US/08/687,355A
; FILING DATE: No. 5989834ember 26, 1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: White, John P.
25 ; REGISTRATION NUMBER: 28,678
; REFERENCE/DOCKET NUMBER: 44742-A-PCT/JPW/MAT
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 212-278-0400
; TELEFAX: 212-391-0525
30 ; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 381 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
35 ; MOLECULE TYPE: protein
US-08-687-355A-6

Query Match 21.1%; Score 454.5; DB 2; Length 381;
Best Local Similarity 30.1%; Pred. No. 3.7e-33;
40 Matches 104; Conservative 75; Mismatches 119; Indels 47; Gaps
10;

Qy 25 IAHYGLRPLVLTPQLP-----ARARLALLLVGMLIFALALFGNALVVVVTR 71
: || | :|| :: ||: | | | : ||:||:|| :|:
45 Db 18 VEFYGSPTTPRGELEPDPEPELIDSTKLVEQVVLILAYCSIILLGVVGNSLVIHVVIK 77

Qy 72 SKAMRTVTNIFICSLALSDLILVFFCIPVTMLQNVSDTWLGGAFICKMVPFVQCTAIVTE 131
|:||||| || :||:|||: |:| |: :| | | :|| :||: | |:
Db 78 FKSMRTVTNFFIANLAVADLLVNTLCLPFTLTYTLMGEWKMGPVLCHLVPYAQGLAVQVS 137

50 Qy 132 ILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPM---WHVQRLEIK 188
:|| | :||:||: | : : : : | :|| :| |: :||: | :|| :|:
Db 138 TITLTVIALDRHRCIV--YHLESKISKQISFLIIGLAWGVSALLASPLAIFREYSLIEII 195

Art Unit: 1646

Qy 189 YDFLYEKEHICCLEEW---SSPVHQKIYTTFILVTLFLLPLLLSVLYGKIGYELW--IK 243
|| | : | :| |: :| :| :||| :| | :| | :|
Db 196 PDF----EIVACTEKWPGECKSVYGTVYSLSTLLILYVPLPLGIISFSYTRI---WSKLK 247

5 Qy 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFAVCWAPFHIVHMMIEYSNFE-- 301
: |: | | :| :| :| :| :| | | | | :| :| :|
Db 248 NHVSPGAASDHYH-----QRRHKMTKMLVCVVVVFAVSWLPLHAFQLAVDIDSHVLD 299

10 Qy 302 -KEYDEVTIKMFIAIVQIIGFFNSICNPIIYALMNENFKKNFVSA 345
||| |:|| :|| :| |:|| | | |:|| |:||
Db 300 LKEY----KLIFTVFHIIAMCSTFANPLLYGWMNSNYRKAFLSA 339

Art Unit: 1646

Art Unit: 1646

RESULT 5
US-10-272-983-38
; Sequence 38, Application US/10272983
5 ; Publication No. US20030148450A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Ruoping
; APPLICANT: Dang, Huong T.
; APPLICANT: Liaw, Chen W.
10 ; APPLICANT: Lin, I-Lin
; TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
; FILE REFERENCE: AREN0050
; CURRENT APPLICATION NUMBER: US/10/272,983
; CURRENT FILING DATE: 2002-10-17
15 ; PRIOR APPLICATION NUMBER: US/09/417,044
; PRIOR FILING DATE: 1999-10-12
; PRIOR APPLICATION NUMBER: 60/109,213
; PRIOR FILING DATE: 1998-11-20
; PRIOR APPLICATION NUMBER: 60/120,416
20 ; PRIOR FILING DATE: 1999-02-16
; PRIOR APPLICATION NUMBER: 60/121,851
; PRIOR FILING DATE: 1999-02-26
; PRIOR APPLICATION NUMBER: 60/123,946
; PRIOR FILING DATE: 1999-03-12
25 ; PRIOR APPLICATION NUMBER: 60/123,949
; PRIOR FILING DATE: 1999-03-12
; PRIOR APPLICATION NUMBER: 60/136,436
; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,437
30 ; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,439
; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,567
; PRIOR FILING DATE: 1999-05-28
35 ; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
; LENGTH: 431
40 ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-983-38

45 Query Match 81.7%; Score 1764; DB 12; Length 431;
 Best Local Similarity 79.9%; Pred. No. 1.4e-155;
 Matches 338; Conservative 37; Mismatches 38; Indels 10; Gaps
3;

50 Qy 4 NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTPQLPARARLALLLVGMLIFALALFGNA 63
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 Db 5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLALVLTGVLFALALFGNA 64

Qy 64 LVVYVVTRS KAMRTVTNIFICSL ALS DLLIVFFCIPV TMLQNVSDTWLGGAFICKMVPFV 123
 || ||||||||||||||||||||| ||||||||||||| :|| | |||||||||||||

Art Unit: 1646

Db	65	LVFYVVTRSKAMRTVTNIFICSLALSDLITFFCIPVTMLQNI SDNLGGAFICKMVPFV	124
Qy	124	QCTAIVTEILMTMCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ	183
5	Db	125 QSTAVVTEMLTMCIAVERHQGLVHPFKMKWQYTNRAFTMLGVVWLAVIVGSPMWHVQ	184
Qy	184	RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSVLYGKIGYELWIK	243
10	Db	185 QLEIKYDFLYEKEHICCLEEWTS PVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK	244
Qy	244	KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFAVCWAPFHIVHMMIEYSNFEKE	303
Db	245 KRGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVALFAVCWAPFHVVHMMIEYSNFEKE	304	
15	Qy	304 YDEVTIKMI FAIVQIIGFFNSICNPPIYALMNNENFKNFVSAVCYCIVKETPSSARKHGS	363
Db	305 YDDVTIKMI FAIVQIIGFSNSICNPIVYAFMNNENFKKNVLSAVCYCIVNKTFSPAQRHGN	364	
20	Qy	364 SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKR-----RSKVA-S	413
Db	365 SGITMMRKKAKFSLREN PVEETKGEAFSDGNIEVKLCEQTEEKKKLKRHLALFRSELAEN	424	
Qy	414 CPL 416		
25	Db	425 SPL 427	
		:	

LOCUS	AK048439	2864 bp	mRNA	linear	HTC 05-DEC-	
2002						
30	DEFINITION	Mus musculus 16 days embryo head cDNA, RIKEN full-length enriched library, clone:C130060K24 product:hypothetical Rhodopsin-like GPCR superfamily containing protein, full insert sequence.				
ACCESSION	AK048439					
VERSION	AK048439.1	GI:26339331				
35	KEYWORDS	HTC; CAP trapper.				
SOURCE	Mus musculus (house mouse)					
ORGANISM	Mus musculus					
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.						
40	REFERENCE	1				
AUTHORS	Carninci, P. and Hayashizaki, Y.					
TITLE	High-efficiency full-length cDNA cloning					
JOURNAL	Meth. Enzymol. 303, 19-44 (1999)					
MEDLINE	99279253					
45	PUBMED	10349636				
REFERENCE	2					
AUTHORS	Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.					
TITLE	Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new					
50	genes					
JOURNAL	Genome Res. 10 (10), 1617-1630 (2000)					

Art Unit: 1646

5 MEDLINE 20499374
PUBMED 11042159
REFERENCE 3
AUTHORS Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N.,
Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M.,
Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,
Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,
Fujiwaki,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M.,
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S.,
Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
10 TITLE RIKEN integrated sequence analysis (RISA) system--384-format
sequencing pipeline with 384 multicapillary sequencer
15 JOURNAL Genome Res. 10 (11), 1757-1771 (2000)
MEDLINE 20530913
PUBMED 11076861
REFERENCE 4
AUTHORS Kawai,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
Saito,T., Okazaki,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R.,
Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T.,
Fleischmann,W., Gaasterland,T., Gissi,C., King,B., Kochiwa,H.,
20 Kuehl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesole,G.,
Quackenbush,J., Schriml,L.M., Staubli,F., Suzuki,R., Tomita,M.,
Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,
Baldarelli,R., Barsh,G., Blake,J., Boffelli,D., Bojunga,N.,
Carninci,P., de Bonaldo,M.F., Brownstein,M.J., Bult,C.,
25 Fletcher,C., Fujita,M., Gariboldi,M., Gustincich,S., Hill,D.,
Hofmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Marchionni,L., Mashima,J., Mazzarelli,J., Mombaerts,P.,
Nordone,P., Ring,B., Ringwald,M., Rodriguez,I., Sakamoto,N., Sasaki,H.,
30 Sato,K., Schonbach,C., Seya,T., Shibata,Y., Storch,K.F.,
Suzuki,H., Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
and Hayashizaki,Y.
35 TITLE Functional annotation of a full-length mouse cDNA collection
JOURNAL Nature 409 (6821), 685-690 (2001)
MEDLINE 21085660
PUBMED 11217851
REFERENCE 5
40 AUTHORS The FANTOM Consortium and the RIKEN Genome Exploration Research
Group Phase I & II Team.
TITLE Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs
45 JOURNAL Nature 420, 563-573 (2002)
REFERENCE 6 (bases 1 to 2864)
AUTHORS Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Bono,H.,
Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A., Hashizume,W.,
50 Hayashida,K., Hayatsu,N., Hiramoto,K., Hiraoka,T., Hirozane,T.,

Art Unit: 1646

5 Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,
Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,
Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N.,
Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,
Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,
Muramatsu, M. and Hayashizaki, Y.

10 10 TITLE Direct Submission

JOURNAL Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku,

15 15 Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp,
URL: http://genome.gsc.riken.go.jp/, Tel: 81-45-503-9222,
Fax: 81-45-503-9216)

20 20 COMMENT cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.

25 25 Please visit our web site for further details.
URL: http://genome.gsc.riken.go.jp/
URL: http://fantom.gsc.riken.go.jp/.

30 30 FEATURES source Location/Qualifiers
1. .2864
/organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="FANTOM_DB:C130060K24"
/db_xref="taxon:10090"
/clone="C130060K24"
/tissue_type="head"
/clone_lib="RIKEN full-length enriched mouse cDNA
library"
/dev_stage="16 days embryo"

35 35 CDS 64. .1161
/note="unnamed protein product; hypothetical
Rhodopsin-like GPCR superfamily containing protein
(InterPro|IPR000276, evidence: InterPro)
putative"
/codon_start=1
/protein_id="BAC33337.1"
/db_xref="GI:26339332"

40 40 /translation="MLIFALALFGNALVYVVTRSKAMRTVTNIFICSLALSDLVLF
FCIPVTMLQNVSDTTLGGAFICKMVPFVQCTAIVTEILMTCIAVERHQGLVHPFKMK
RQYTNQRAFTMLGVVWLVAIIIGSPMWHVQRLEIKYDFLYEKEHICCLEWSSPVHQK
IYTTFILVTLFLLPLLLSVLYGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKR

Art Unit: 1646

AVIMMVTVVVLFAVCWAPFHIVHMMIEYSNFEKEYDEVTIKMIFAIVQIIGFFNSICN

PIIYALMNENFKKNFVSAVCYCIVKETPSSARKHGSSGAMVMHRRAKLAARENVPVEIK
5 GEAFFGSNIDIKWCEQPEKKRRSKVASCPL"BASE COUNT 839 a 609 c 602 g 814 t
ORIGIN10 Query Match 94.9%; Score 1681; DB 11; Length 2864;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1681; Conservative 0; Mismatches 0; Indels 0; Gaps
0;15 Qy 92 GGCCACTGGTGCTACCCCGCAGCTTCCCAGCGCGCCAGGCTGGCCCTCCTGCTGGTCG 151
Db 2 GGCCACTGGTGCTACCCCGCAGCTTCCCAGCGCGCCAGGCTGGCCCTCCTGCTGGTCG 6120 Qy 152 GCATGCTCATCTTGCCCTGGCGCTTCTGGCAACGCCCTGGTAGTCTATGTGGTGACCC 211
Db 62 GCATGCTCATCTTGCCCTGGCGCTTCTGGCAACGCCCTGGTAGTCTATGTGGTGACCC 12125 Qy 212 GCAGCAAGGCCATGCGCACCGTCACCAACATCTCATCTGCTCCCTGGCACTCAGCGACC 271
Db 122 GCAGCAAGGCCATGCGCACCGTCACCAACATCTCATCTGCTCCCTGGCACTCAGCGACC 181Qy 272 TGCTCATCGTCTTCTCTGCATCCGGCACCATGCTCCAGAACGTCTCGGACACCTGGC 331
Db 182 TGCTCATCGTCTTCTCTGCATCCGGCACCATGCTCCAGAACGTCTCGGACACCTGGC 24130 Qy 332 TGGGGGGTGCCTTCATTGCAAAATGGTCCCATTGTCCAGTGCAGTGCATTGTGACAG 391
Db 242 TGGGGGGTGCCTTCATTGCAAAATGGTCCCATTGTCCAGTGCAGTGCATTGTGACAG 30135 Qy 392 AAATCCTTACTATGACCTGCATTGCTGTGGAAAGGCACCAGGGACTTGTCCATCCTTTA 451
Db 302 AAATCCTTACTATGACCTGCATTGCTGTGGAAAGGCACCAGGGACTTGTCCATCCTTTA 36140 Qy 452 AAATGAAGCGGCAGTACACCAATCAAAGAGCTTCACAATGCTAGGTGTGGGTGGCTGG 511
Db 362 AAATGAAGCGGCAGTACACCAATCAAAGAGCTTCACAATGCTAGGTGTGGGTGGCTGG 42145 Qy 512 TGGCCATCATCAGGATCACCCATGTGGCATGTGCAGCGACTTGAGATTAAGTATGACT 571
Db 422 TGGCCATCATCAGGATCACCCATGTGGCATGTGCAGCGACTTGAGATTAAGTATGACT 481Qy 572 TCCTATATGAAAAAGAACACATCTGCTGCCTGGAAAGAGTGGAGCAGCCCCGTGCACCAGA 631
Db 482 TCCTATATGAAAAAGAACACATCTGCTGCCTGGAAAGAGTGGAGCAGCCCCGTGCACCAGA 54150 Qy 632 AGATCTACACCACCTTCATCCTTGTCAACCCTTCTGCTACCACGTGGCTGCTCTCTG 691
Db 542 AGATCTACACCACCTTCATCCTTGTCAACCCTTCTGCTACCACGTGGCTGCTCTCTG 601

Qy 692 TCCTCTACGGAAAATCGGTTATGAGCTTGGATCAAGAAAAGAACATCGGGATGGCTCAG 751

Art Unit: 1646

Db 602 TCCTCTACGGGAAATCGTTATGAGCTTGGATCAAGAAAAGAATCGGGATGGCTCAG 661

5 Qy 752 TGCTCCGAACATATTCAATGGAAAAGAAATGTTCAAAATAGCCAGAAAGAAGCGAGCTG 811

Db 662 TGCTCCGAACATATTCAATGGAAAAGAAATGTTCAAAATAGCCAGAAAGAAGCGAGCTG 721

Qy 812 TGATCATGATGGTACAGTCGTGGTCTCTTGCTGTGCTGGCACCTTCACATCG 871

10 Db 722 TGATCATGATGGTACAGTCGTGGTCTCTTGCTGTGCTGGCACCTTCACATCG 781

Qy 872 TTCACATGATGATTGAATACAGTAATTTGAAAAGGAATATGATGAAGTCACAATCAAGA 931

15 Db 782 TTCACATGATGATTGAATACAGTAATTTGAAAAGGAATATGATGAAGTCACAATCAAGA 841

Qy 932 TGATTTTGCTATAGTGCATAATAATTGGATTTCACCTCCATCTGTAATCCATTATT 991

Db 842 TGATTTTGCTATAGTGCATAATAATTGGATTTCACCTCCATCTGTAATCCATTATT 901

20 Qy 992 ATGCACTTATGAATGAAAACTTCAAAAAAACTTGTCTGCCGTTGCTATTGCATTG

1051 Db 902 ATGCACTTATGAATGAAAACTTCAAAAAAACTTGTCTGCCGTTGCTATTGCATTG 961

25 Qy 1052 TGAAGGAAACACCTTCTTCAGCACGGAAAGCATGGAAGTTCAGGAGCTATGGTATGCACA

1111 Db 962 TGAAGGAAACACCTTCTTCAGCACGGAAAGCATGGAAGTTCAGGAGCTATGGTATGCACA

30 Qy 1112 GGAGGGCAAAGTTAGCTGCAAGAGAGAATCCTGTAGAGATCAAAGGAGAAGCATTGGGG

1171 Db 1022 GGAGGGCAAAGTTAGCTGCAAGAGAGAATCCTGTAGAGATCAAAGGAGAAGCATTGGGG

35 Qy 1081 1172 GCAGCAACATCGATATCAAGTGGTGTGAACAGCCAGAAAAGAAGAAGAGGGAGATCAAAG

1231 Db 1082 GCAGCAACATCGATATCAAGTGGTGTGAACAGCCAGAAAAGAAGAAGAGGGAGATCAAAG

40 Qy 1291 1232 TGGCATCTTGTCCCTTTAGTTCCGAATTCTGAGAGCTCTGCTGTAGACGTAAACACTG

1141 Db 1142 TGGCATCTTGTCCCTTTAGTTCCGAATTCTGAGAGCTCTGCTGTAGACGTAAACACTG

45 Qy 1291 1292 TACCAATGTCTTCAGAATGAGTATCTGTCAACTGTAATCGAAAGAAAATGATTTGAGA

1201 Db 1202 TACCAATGTCTTCAGAATGAGTATCTGTCAACTGTAATCGAAAGAAAATGATTTGAGA

50 Qy 1351 1261

Art Unit: 1646

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Qy	1412	GATTCAAGAGTTAAAGTCATCCTAGCTGCACGATAAGTTGAGGATAACCTGGGCTAC
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10	1381	
Qy	1472	AAGAGACCCTGTCTAAGAAGCCATAATAATTAAAACAACCATCCTTAACTAATGATAAT
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Db	1382	AAGAGACCCTGTCTAAGAAGCCATAATAATTAAAACAACCATCCTTAACTAATGATAAT
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Qy	1532	GACAAAGTATTTCCATTGAAAATACATGTAAGCTGCAATTGAAAAATTATTGAACC
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Qy	1652	TGGTTGGTTACCTGTGTATATGCTTCACTTGATAAAACTCAATGATCTCAGC
1711		
Db	1562	TGGTTGGTTACCTGTGTATATGCTTCACTTGATAAAACTCAATGATCTCAGC
30	1621	
Qy	1712	TAGTAACCTTCTGTGTGGTCAATGTGATATGATTCCCTATATATTGCTAAATTGAAT
1771		
Db	1622	TAGTAACCTTCTGTGTGGTCAATGTGATATGATTCCCTATATATTGCTAAATTGAAT
40	1681	
Qy	1772	G 1772
45	Db	1682 G 1682

Art Unit: 1646

RESULT 5

US-10-272-983-38

5 ; Sequence 38, Application US/10272983
; Publication No. US20030148450A1
; GENERAL INFORMATION:
; APPLICANT: Chen, Ruoping
; APPLICANT: Dang, Huong T.
; APPLICANT: Liaw, Chen W.
10 ; APPLICANT: Lin, I-Lin
; TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors
; FILE REFERENCE: AREN0050
; CURRENT APPLICATION NUMBER: US/10/272,983
; CURRENT FILING DATE: 2002-10-17
15 ; PRIOR APPLICATION NUMBER: US/09/417,044
; PRIOR FILING DATE: 1999-10-12
; PRIOR APPLICATION NUMBER: 60/109,213
; PRIOR FILING DATE: 1998-11-20
; PRIOR APPLICATION NUMBER: 60/120,416
20 ; PRIOR FILING DATE: 1999-02-16
; PRIOR APPLICATION NUMBER: 60/121,851
; PRIOR FILING DATE: 1999-02-26
; PRIOR APPLICATION NUMBER: 60/123,946
; PRIOR FILING DATE: 1999-03-12
25 ; PRIOR APPLICATION NUMBER: 60/123,949
; PRIOR FILING DATE: 1999-03-12
; PRIOR APPLICATION NUMBER: 60/136,436
; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,437
30 ; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,439
; PRIOR FILING DATE: 1999-05-28
; PRIOR APPLICATION NUMBER: 60/136,567
; PRIOR FILING DATE: 1999-05-28
35 ; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 38
; LENGTH: 431
40 ; TYPE: PRT
; ORGANISM: Homo sapiens

US-10-272-983-38

45 Query Match 81.7%; Score 1764; DB 12; Length 431;
 Best Local Similarity 79.9%; Pred. No. 1.4e-155;
 Matches 338; Conservative 37; Mismatches 38; Indels 10; Gaps
3;

50 Qy 4 NLTAEQLSALLRLHNLTREQFIAHYGLRPLVLTQLPARARLALLLVGMLIFALALFGNA 63
 |:| || | ||| ||||| ||||| | ||||| ||:|| | ||:|||:| |:||| ||| |||
 Db 5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLALVLTGVLIFALALFGNA 64
 Qy 64 LVVYVVTRSKAMRTVTNIFICSLASDLLIVFFCIPVTMLQNVSDTWLGGAFICKMVPFV 123
 || ||||||| ||||| ||||| ||||| ||||| ||||| |||||:|| | ||||| ||| |||

Art Unit: 1646

Db 65 LVFYVVTRSKAMRTVTNIFICSLALSDLITFFCIPVTMLQNIISDNWLGGAFICKMVPFV 124

Qy 124 QCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183
| | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |

5 Db 125 QSTAVVTEMLTMTCIAVERHQGLVHPFKMKWQYTNRRAFTMLGVVWLVAIVGSPMWHVQ 184

Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSVLYGKIGYELWIK 243
: | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |

Db 185 QLEIKYDFLYEKEHICCLEEWTS PVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK 244

10 Qy 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVF AWCAPFHIVHMMIEYSNFEKE 303
| | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |

Db 245 KRGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVVAL FAVCWAPFHVVHMMIEYSNFEKE 304

15 Qy 304 YDEVTIKMI FAIVQIIGFFNSICNPIIYALMNENFKNFVSAVCYCIVKETPSSARKHGS 363
| | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |

Db 305 YDDVTIKMI FAIVQIIGFSNSICNPIVYAFMNENFKNVLSAVCYCIVNKTFS PAQRHGN 364

Qy 364 SGAMVMHRRAKLAAREN PV-EIKGEAFGGSNIDIKWCEQPEKKR-----RSKVA-S 413
| | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |

20 Db 365 SGITMMRKKAKFSLREN PVEETKGEAFSDGNIEVKLCEQTEEKKKLKRHLALFR SELAEN 424

Qy 414 CPL 416
| |

25 Db 425 SPL 427